Environmental Assessment

Sleeping Buffalo Wildlife Management Area
Cattail Management Project

May 2018

MONTANA FISH, WILDLIFE & PARKS

Draft Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Reduction of cattail coverage on Sleeping Buffalo: Area 8 Wildlife Management Area (WMA) through a combination of prescribed burning, mechanical cutting, and chemical spraying over the next 5-10 years.

2. Agency authority for the proposed action: MT FWP has authority under Section 87-1-210 MCA to protect, enhance, and regulate the use of Montana's fish and wildlife resources for public benefit now and in the future.

3. Anticipated Annual Schedule:

Estimated **Prescribed Burn** Commencement Date: **April 1**
Estimated Completion Date: **July 31***
Estimated **Herbicide Application** Commencement Date: **June 1**
Estimated Completion Date: **October 31**
Estimated **Mechanical Cutting** Commencement Date: **January 1 or October 31**
Estimated Completion Date: **March 15**

*For a prescribed burn to have the highest success on Sleeping Buffalo WMA: Area 8 the optimal timing can broadly be identified as April through June. The primary factors contributing to success are the dryness of the soil pre-burn and the ability for MT FWP staff to raise water levels post-burn to adequately inundate burned cattails before regrowth can occur. However, due to the unpredictable nature of spring weather in Eastern Montana the timing of the burn can vary greatly. If spring weather causes significant delays, and the optimal burn time has passed, it may be necessary to delay the prescribed burn past the estimated completion date. Mechanical cutting would take place prior to burning during winter months if weather and soil conditions permit or in late fall. Herbicide would be applied post-burn on new emergent cattails and regrowth through first frost kill in accordance with herbicide label.

5. Location affected by proposed action (county, range and township – included map): Phillips County, Township 32 N Range 33 E Section 20 and Township 32 N Range 33 E Section 19. **Map is attached to end of this document**.

6. Project size -- estimate the number of acres that would be directly affected that are currently:

	Acres		Acres
(a) Developed:		(d) Floodplain	0
Residential	0		
Industrial	0	(e) Productive:	

(existing shop area)		Irrigated cropland	0
(b) Open Space/ Woodlands/Recreation	0	Dry cropland	0
		Forestry	0
(c) Wetlands/Riparian:	20 in 2018, 80+ over 5-10 years	Rangeland	0
Areas		Other	0

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits: permits would be filed at least 2 weeks prior to project start.

Phillips County
Burn Permit

(b) Funding:

Montana Fish, Wildlife and Parks
The citizen-based Wetland Protection Advisory Council approved the funding of this proposed project through the Migratory Bird Wetland Program. This program was authorized by Montana Legislature in 1985 and authorizes the Department to utilize funds from the sale of the state's migratory bird hunting licenses, which provides funds for the protection, conservation, and development of wetlands in Montana.
Funding Amount: **$6,250-$8,250**

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Bureau of Reclamation **Landowner**

9. Narrative summary of the proposed action: There are two managed wetlands on Sleeping Buffalo: Area 8 WMA. Managing and improving wetland and upland habitats for the benefit of wildlife and providing public opportunity in the forms of hunting, trapping, hiking, and wildlife viewing are the primary management objectives for Area 8 WMA. In addition to providing conservation and recreational uses these wetlands provide irrigation water and flood control in the area.

Over the years cattails have gained a foothold within these wetland complexes and have been decreasing the amount of open water and available habitat for shorebirds and waterfowl. The larger of the two ponds has had a leaking water control structure (scheduled to be repaired early 2018) for the past three years, making it difficult to control and maintain adequate water depth in both ponds. Due to lower water levels, the smaller pond has experienced a significant increase in cattail coverage over the past years, especially in 2016 and 2017.

In order to improve available habitat for shorebirds and waterfowl, FWP proposes using a combination of mechanical cutting, prescribed burning, and chemical spraying over an area up to 80 acres. Because managers are not certain which methods will prove to be the most effective and cost-efficient, a Latin Squares design would be used across the proposed project

area to randomly assign different control methods to different 5-acre plots. This would allow FWP to test a combination of methods on approximately two age classes of cattails; one stand that has been in the wetland for 10+ years and a newer stand that has formed in the past 2 years. This design would also help compare costs to relative success rates. Our goal is not to remove all cattails but reduce their coverage by approximately 75% in order to achieve waterfowl and shorebird habitat management goals. This could take more than one year, but we are hopeful that by utilizing a multifaceted approach we would have success across most of the area. After all treatments are conducted the wetland would then be flooded to adequate water levels in spring/early summer of 2018 to minimize future expansion. In order to achieve the desired response, we would follow up post-burn and herbicide application by conducting surveys in subsequent years to gauge how effective the management practices have been to curtail cattail growth.

Following the initial project, the wetland would be managed to maintain productivity and reduce cattail growth in future years. The same process of mechanical cutting, prescribed burning and chemical spraying would be implemented for the following 5-10 years, dependent on funding and weather constraints, until the total cattail marsh coverage on the eastern pond has decreased by 75%. Neighboring landowners would be contacted prior to any subsequent prescribed burns. Water levels on the large wetland would also be managed to minimize cattail expansion.

10. Description and analysis of reasonable alternatives:

Alternative A: No Action – If no action is taken, this pond will eventually be completely choked out by cattails and little to no waterfowl production would occur on this Wildlife Management Area. With no waterfowl production, these wetlands would not achieve the Departments objective for this Wildlife Management Area.

Alternative B: Proposed Action – Reduce cattail coverage by 75% via mechanical cutting, prescribed burns and chemical spraying.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Soil instability or changes in geologic substructure?			X		YES	1a
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X		YES	1b
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		YES	1d
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?			X		YES	1e

1a. Immediately following the burn bare soil would be exposed, but we would disk the site as soon as it is safe (soil moisture dependent) and then flood to reduce soil loss due to wind erosion.

1b. There may be some light erosion due to wind following the burn, but the reduction in the monoculture of cattails and increased availability of nutrients following the burn would improve the vegetative community that the soil will support.

1d. Shoreline would be temporarily exposed until wetland is flooded following the burn.

1e. Fire will be present but all safety precautions would be taken and neighboring landowners would be contacted regarding the proposed activities so they are aware.

2. AIR Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X		YES	2a
b. Creation of objectionable odors?			X			2b
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		X				

2a. Air quality would be temporarily affected by smoke particulates in the immediate vicinity. All steps would be taken to conduct a quick and thorough prescribed burn to minimize prolonged affect.

2b. Temporary odor due to burning of organic matter.

3. WATER Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			3h
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?				X		3d
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?			X			3f
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?			X			3f,3h
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?			X			3k
l. For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.)		X				
m. For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		X				

3d. Decreased cattail coverage in the wetland would increase open water habitat

3f. Research has shown that impacts to the wetland water quality itself are affected by burns producing a temporary increase in pH, alkalinity, and dissolved inorganic carbon, but should not affect groundwater within the area.

3h. Only herbicide approved for aquatic use would be applied and should not affect surface or groundwater within the area.

3k. Increased open water would increase the use by waterfowl and water birds, which in return would provide a greater use and appreciation by hunters, bird watchers, and other recreationists.

4. VEGETATION Will the proposed action result in?	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?				X		4a
b. Alteration of a plant community?				X		4a
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		YES	4e
f. For P-R/D-J, will the project affect wetlands, or prime and unique farmland?			X			4f
g. Other:		X				

4a. The combination of a prescribed burn, aquatic herbicide and mechanical cutting should reduce the monoculture of cattails and increase the biodiversity of the community.

4e. Temporarily exposed and disturbed soil may present an opportunity for weeds to grow, but flooding and post burn weed management would be done to prevent most occurrences.

4f. Temporary effect on wetlands due to draining, burn, chemical application and mechanical cutting with an end result of increased biodiversity and use by wildlife once restored.

5. FISH/WILDLIFE Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Deterioration of critical fish or wildlife habitat?			X		YES	5a
b. Changes in the diversity or abundance of game animals or bird species?				X		5b
c. Changes in the diversity or abundance of nongame species?				X		5b
d. Introduction of new species into an area?			X			5d
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5f
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			5g
h. For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		X				
i. For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)			X			5i

5a. Temporary loss of vegetation, but we anticipate/hope to have all management practices completed before the main nesting and brood rearing portion of the year (May 15 – August 1). By removing cattails there could potentially be a short-term negative impact on certain avian species that utilize cattails for nesting such as red-winged blackbirds, coots, soras, as well as other certain species. Since this proposal is for only 20-acres of cattail removal, in a wetland complex comprising of approximately 495 wetland acres, we anticipate that any potentially affected species would disperse to other areas of the wetland until management actions are completed. Once the management practices are completed the area would provide a more heterogeneous composition of plant species and open water resembling a hemi-marsh, which provides a wider array of habitat that could attract a greater diversity of species and would provide additional nesting areas, hiding cover, thermal cover, and forage for wetland dependent species.

5b. The removal of cattail marshes would create more open water and allow more diverse and an increased abundance of waterfowl and shorebirds use on these ponds.

5d. Reducing the dominance of cattails within the wetland should increase the biodiversity of the area and may cause a new plant and/or wildlife species to move into the area.

5f. According to the Montana Natural Heritage Program there are no at risk and endangered species that occupy wetland habitat within the WMA. There have been species of those classification observed within Phillips County, but we have not observed them within the WMA and do not feel they are present and/or will be impacted negatively by our management practice.

5g. Temporary displacement by species that have moved back into the area, but surrounding wetlands within the WMA and other habitats will provide necessary cover until our activities are completed.

5i. Once complete the WMA may provide the diverse habitat needed for additional species to utilize the WMA.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				

7. LAND USE **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			X		YES	7a
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?			X			7c
d. Adverse effects on or relocation of residences?		X				

7a. If livestock are present they may have to be temporarily removed during the burning process to minimize their exposure to the smoke. We will contact and work with the neighboring landowners during the entire process.

7c. WMA would be temporarily closed during burn, effecting land use by the public.

8. RISK/HEALTH HAZARDS **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		YES	8a
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X		YES	8a
d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a)			X		YES	8a,8d

8a. The burn team may use their drip torches with a small amount of diesel and gasoline. All precautionary measures (low wind day, water tanks on scene, fire crew, etc) would be taken to keep the fire within the berms to prevent any spread to neighboring areas where an increase in hazardous situations could occur.

8a. Direct contact with herbicides can be harmful to applicators. Protective equipment would be used, and the herbicide label would be followed exactly to prevent harmful effects.

8d. An aquatic herbicide would be used. Herbicide label directions would be followed exactly.

9. COMMUNITY IMPACT **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X			9e

9e. During the burn the public would not be allowed within the portion of the WMA being treated, but at this time of the year use is very minimal.

10. PUBLIC SERVICES/TAXES/UTILITIES **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources		X				
f. Define projected maintenance costs.		X				

11. AESTHETICS/RECREATION Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X			11a
b. Alteration of the aesthetic character of a community or neighborhood?			X			11a
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)		X				
d. For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.)		X				

11a. Burn, cut and herbicide area may be aesthetically unappealing for a small amount of time until the area is flooded and vegetation starts to regenerate.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)		X				

C. SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?			X		YES	13b
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?			X			13e
f. For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)			X			13e
g. For P-R/D-J, list any federal or state permits required.		X				

13b. As with any prescribed burn, there is a small risk of fire breaking containment. However, trained prescribed burn professionals would take all precautionary measures (low wind day, water tanks on scene, fire crew, etc) to keep the fire within the berms to prevent any spread to neighboring areas where an increase in hazardous situations could occur.

13b. Direct contact with herbicides can be harmful to applicators. Protective equipment would be used, and the herbicide label would be followed exactly to prevent harmful effects.

13e. This proposal is not expected to generate any substantial controversy or opposition. Neighboring landowners would be contacted before the comment period to explain and alleviate any questions or concerns regarding the proposal, as well as to gauge their support. Area sportsman also support thinning cattails to improve opportunity on the

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency: None should be needed.

PART III. NARRATIVE EVALUATION AND COMMENT

The proposed prescribed burn, herbicide application and mechanical cutting of the cattail marsh would enhance the waterfowl production of this wetland. Creating more open water within the system would increase the diversity and abundance of birds able to

inhabit these ponds and produce more birds, which would help achieve the goals of Area 8's wetlands.

Project activities are not expected to have significant impacts on the physical environment (i.e. land, air, water, vegetation and fish/wildlife resources) or the human environment (i.e. land use, aesthetics, community impact, cultural/historic resources, etc.). Impacts are expected to be minor at the most and will generally be of short duration, except for the desired removal of the cattail marsh, which will hopefully be for the long-term. Marsh birds, small mammals, waterfowl, and other species that rely on existing cattails for cover would be slightly impacted in the short-term, but impacts overall are expected to benefit the greatest diversity of wildlife. Expected long-term consequences from the proposed vegetation enhancement project would be improved wildlife habitat conditions and biodiversity on the WMA resulting in increased wildlife use, particularly waterfowl and shorebird use, of the area.

PART IV. PUBLIC PARTICIPATION

1. Public involvement:

The public would be notified in the following manners to comment on this current EA, the proposed action and alternatives:

- One public notices in each of these papers: Helena Independent Record, Phillips County News and The Glasgow Courier.
- One statewide press release;
- Public notice on the Fish, Wildlife & Parks web page: *http://fwp.mt.gov*.

Copies of this environmental assessment would be distributed to the neighboring landowners and interested parties to ensure their knowledge of the proposed project.

This level of public notice and participation is appropriate for a project of this scope having limited impacts, many of which can be mitigated.

2. Duration of comment period:

Written comments will be accepted until 5:00 p.m., June 7 ,2018 and can be mailed to the address below:

Attn: Cattail Area 8 Wetland Restoration Burn
MT Fish, Wildlife & Parks
1 Airport Road
Glasgow, MT 59230.

Comments can also be emailed to stedrow@mt.gov. Hardcopies are available if requested by calling (406) 228-3700.

PART V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No
If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action.

An EIS is not deemed to be required for the proposed action. An EA is deemed to be the appropriate level of analysis given the overall size and scope of the project. In addition, overall negative impacts are expected to be minimal at the most. The proposed project also has support from interested sportsmen.

2. Person(s) responsible for preparing the EA:

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APPENDICES: Map of location. See next page.

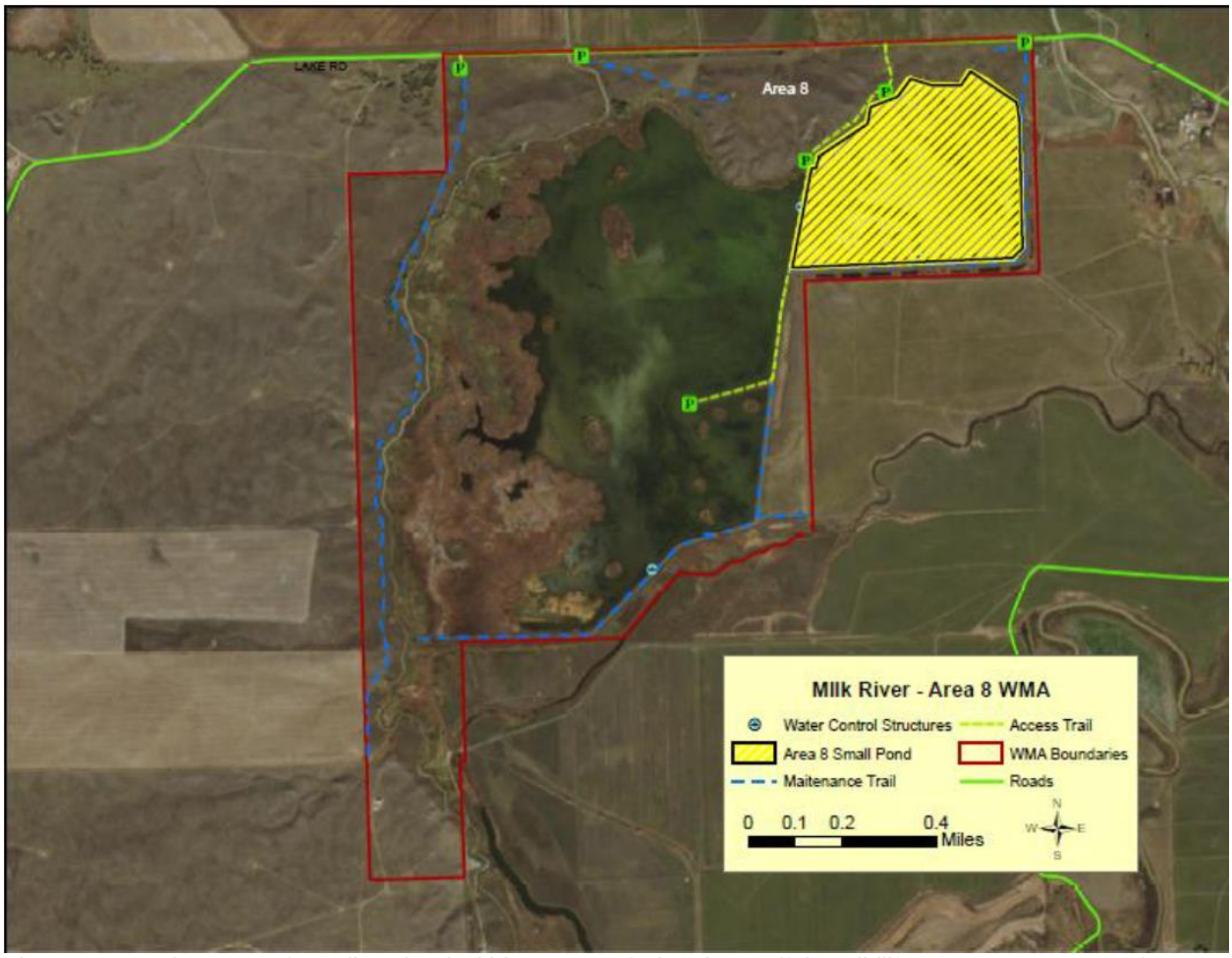

Figure 1. Location map of small wetland within Area 8 of Sleeping Buffalo Wildlife Management Area for proposed habitat enhancement.

Figure 2. 2015 National Agriculture Imagery Program (Color Infrared) of east cell with proposed 2018 habitat enhancement activities for each grid cell within the Sleeping Buffalo: Area 8 Wildlife Management Area.